

REMARKS:

Claims 1-5 were pending in this application.

Claims 1, 2 and 4 are amended.

Claim 5 is withdrawn without prejudice or disclaimer of subject matter.

Accordingly, claims 1-4 are pending upon entry of the present amendment.

The claims are amended to incorporate the subject matter of claim 5 into claim 1, and to render more definite the subject matter of claims 2 and 4. Support for storage compartment opening at both ends are found at Specification, page 3, lines 25-27. No new matter is believed to be provided in this amendment.

Reconsideration is requested in view of the above amendments and following remarks.

The Present Invention

Applicants' claimed invention is a rack for use in a compound handling system for handling a multiplicity of tubes containing aliquots of chemical or biological samples. The rack comprises a single piece frame, storage compartments within the frame, and means for retaining a sample tube within each of the storage compartments. The single piece frame has a top side and a bottom side, both capable of receiving the sample tube. The storage compartments within the frame are each configured and dimensioned to receive a sample tube containing a chemical or biological sample. The storage compartments are adjacent to each other and defined by separation walls between them. Each of the storage compartments has an inner wall and is open at the top side of the frame and open at the bottom side of the frame so that a sample tube is insertable into the storage compartment from both the top side of the frame and the bottom side of the frame, and is removable from the storage compartment from both the top side of the frame and the bottom side of the frame with one and the same orientation of the sample tube with respect to the frame. The means for retaining a sample tube within each of the storage compartments are an integral part of the frame. The retaining means comprises a projection of the inner surface or the wall of each

storage compartment, the projection being suitable for snapping between two ridges of the outer wall of a sample tube that is positioned within the storage compartment.

The Prior Art

Leoncavallo does not disclose any storage compartments for a sample tube, but only openings or cutouts 24 of a shelf 12 through which a sample tube can be inserted. These openings are associated with retaining means 34. However, the retaining means disclosed by Leoncavallo do not retain a sample tube at a predetermined position, but at any position within a predetermined range. Moreover, Leoncavallo only discloses insertion of a sample tube into openings 24 from above (see column 3, lines 39-41, and Fig. 7). Nowhere does Leoncavallo even hint at inserting a sample tube into openings 24 from below. In fact, insertion of the tubes from below is not possible with the shapes of the tubes and the shapes of the retaining means disclosed by Leoncavallo. Leoncavallo fails to teach or suggest adjacent storage compartments adjacent to each other and defined by walls between them. Leoncavallo further does not teach or suggest projections in the inner surface of the wall of each storage compartment in which the projection being suitable for snapping between two ridges of the outer wall of a sample tube that is positioned within the storage compartment.

Schwartz does not disclose storage compartments for sample tubes, but openings or cutouts of a base plate 11 through which sample tubes can be inserted. These openings are not adjacent to each other and are not defined by separation walls between them, as is required in applicants' claim 1. The openings shown by Figures 14-17 of Schwartz have retaining means 24, 25, 51, but these retaining means do not retain a sample tube at a predetermined position. Like Leoncavallo, retention of the sample tube is at any position within a predetermined range. Column 1, lines 41-44, points out as aim the possibility of arresting the workpiece (e.g. a sample tube) at different levels. Column 6, lines 14-17, points out the need for an abutment for the workpiece so that it can be positioned exactly. Furthermore, as with Leoncavallo, Schwartz only discloses insertion of a sample tube into compartment 14 from above, not from below. Insertion of the tubes from below is not possible with the shapes of the tubes and the retaining means disclosed by Schwartz. Schwartz does not teach or suggest adjacent storage compartments adjacent to each

other and defined by walls between them. Schwartz also does not teach or suggest projections in the inner surface of the wall of each storage compartment in which the projection being suitable for snapping between two ridges of the outer wall of a sample tube that is positioned within the storage compartment.

Berthold discloses a specimen rack composed of a block having a matrix-like arrangement of MXN through chambers, into which MXN cuvettes can be inserted, individually or in the form of strip-racks. There is no teaching or suggestion in Berthold to provide for projections in the inner surface of the wall of each storage compartment in which the projection being suitable for snapping between two ridges of the outer wall of a sample tube that is positioned within the storage compartment. Berthold does not teach or suggest that the sample tube can be inserted through both the top and the bottom side of the frame with one and the same orientation of the sample tube with respect to the frame.

Verwohlt discloses a microtiration system that comprises a plurality of well and frame-like holder with apertures for receiving the wells. The dimension and the shape of each aperture are such that when a well is inserted into the aperture, the aperture defining means is engaging with the outer surface of the well side wall and is pressed radially outwardly in relation to a central axis of the well till the aperture defining means may snap into locking engagement with the depression or groove formed in the side wall of the well. However, Verwohlt fails to teach or suggest compartments that allow insertions of sample tubes through both the top and the bottom opening of each compartment.

Claim Rejections:

Claims 1 and 4 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,080,232 to Leoncavallo. Applicants respectfully disagree because Leoncavallo does not teach or suggest means for retaining a sample tube within each of said storage compartments in which the retaining means comprises a projection of the inner surface of the wall of each storage compartment, the projection being suitable for snapping between two ridges of the of the outer wall of a sample tube that is positioned within the storage compartment.

Leoncavallo further does not teach or suggest projections in the inner surface of the wall of each storage compartment in which the projection being suitable for snapping between two ridges of the outer wall of a sample tube that is positioned within the storage compartment.

Moreover, Leoncavallo does not teach or suggest storage compartments capable of receiving sample tubes from both the top and the bottom side of the frame with one and the same orientation of sample tube with respect to the frame.

Accordingly, applicants request reconsideration and withdrawal of the claim rejection under 35 U.S.C. 102(b) rejection based on Leoncavallo.

Claims 1 and 4 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,579,929 to Schwartz. Applicants respectfully disagree because Schwartz does not teach or suggest means for retaining a sample tube within each of said storage compartments in which the retaining means comprises a projection of the inner surface of the wall of each storage compartment, the projection being suitable for snapping between two ridges of the of the outer wall of a sample tube that is positioned within the storage compartment.

Schwartz further does not teach or suggest projections in the inner surface of the wall of each storage compartment in which the projection being suitable for snapping between two ridges of the outer wall of a sample tube that is positioned within the storage compartment.

Also, Schwartz does not teach or suggest storage compartments capable of receiving sample tubes from both the top and the bottom side of the frame with one and the same orientation of sample tube with respect to the frame.

Accordingly, applicants request reconsideration and withdrawal of the claim rejection under 35 U.S.C. 102(b) rejection based on Schwartz.

Claim 2 was rejected under 35 U.S.C. 103(a) as being unpatentable over Leoncavallo as applied to claim 1, and further in view of U.S. Patent No. 5,048,957 to Berthold et al. (Berthold). Applicants respectfully disagree because Leoncavallo does not teach or suggest means for retaining a sample tube within each of said storage compartments in which the retaining means comprises a projection of the inner surface of the wall of each storage compartment, the projection being suitable for snapping between two ridges of the of the outer wall of a sample tube that is

positioned within the storage compartment. Further, Berthold does not provide any complementary teaching or suggestion for retaining a sample tube within each of said storage compartments in which the retaining means comprises a projection of the inner surface of the wall of each storage compartment, the projection being suitable for snapping between two ridges of the of the outer wall of a sample tube that is positioned within the storage compartment.

Accordingly, applicants request reconsideration and withdrawal of the claim rejection under 35 U.S.C. 103(a) as being unpatentable over Leoncavallo as applied to claim 1, and further in view of Berthold.

Claim 2 was rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz as applied to claim 1, and further in view of U.S. Schwartz in view of Berthold. Applicants respectfully disagree because Berthold does not teach or suggest means for retaining a sample tube within each of said storage compartments in which the retaining means comprises a projection of the inner surface of the wall of each storage compartment, the projection being suitable for snapping between two ridges of the of the outer wall of a sample tube that is positioned within the storage compartment. A combination of Schwartz and Berthold would not come up with the claimed invention. Furthermore, Berthold fails to provide the complementary teaching or suggestion for storage compartments capable of receiving sample tubes from both the top and the bottom side of the frame with one and the same orientation of sample tube with respect to the frame to add to Schwartz.

Accordingly, applicants request reconsideration and withdrawal of the claim rejection under 35 U.S.C. 103(a) as being unpatentable over Schwartz as applied to claim 1, and further in view of Berthold.

Claims 3 and 5 were rejected under 35 U.S.C. § 103(a) as unpatentable over both Leoncavallo (U.S. Patent No. 5,080,232) as applied to claim 1, and further in view of U.S. Patent No. 5,514,343 to Verwohlt et al. Applicants respectfully disagree because neither Leoncavallo nor Verwohlt teach or suggest means for retaining a sample tube within each of said storage compartments in which the retaining means comprises a projection of the inner surface of the wall of each storage compartment, the projection being suitable for snapping between two ridges of the

of the outer wall of a sample tube that is positioned within the storage compartment. Verwohlt fails to provide the complementary teaching or suggestion for storage compartments capable of receiving sample tubes from both the top and the bottom side of the frame with one and the same orientation of sample tube with respect to the frame to add to Leoncavallo.

Accordingly, applicants request reconsideration and withdrawal of the claim rejection to claim 3 under 35 U.S.C. 103(a) as being unpatentable over Leoncavallo as applied to claim 1, and further in view of Berthold.

Claims 3 and 5 were rejected under 35 U.S.C. § 103(a) as unpatentable over both Schwartz as applied to claim 1 and further in view of Verwohlt et al. Applicants respectfully disagree because neither Schwartz nor Verwohlt teach or suggest means for retaining a sample tube within each of said storage compartments in which the retaining means comprises a projection of the inner surface of the wall of each storage compartment, the projection being suitable for snapping between two ridges of the outer wall of a sample tube that is positioned within the storage compartment. Verwohlt also fails to provide the complementary teaching or suggestion for storage compartments capable of receiving sample tubes from both the top and the bottom side of the frame with one and the same orientation of sample tube with respect to the frame to add to Schwartz. Therefore, a combination of Schwartz and Verwohlt would not come up with the claimed invention.

Accordingly, applicants request reconsideration and withdrawal of the claim rejection to claim 3 under 35 U.S.C. 103(a) as being unpatentable over Schwartz as applied to claim 1, and further in view of Verwohlt.

Claims 1 and 4 were rejected under 35 U.S.C. § 103(a) as unpatentable over both Leoncavallo (U.S. Patent No. 5,080,232) as applied to claim 1, and further in view of U.S. Patent No. 5,048,957 to Berthold et al. Applicants respectfully disagree because neither Leoncavallo nor Berthold teach or suggest means for retaining a sample tube within each of said storage compartments in which the retaining means comprises a projection of the inner surface of the wall of each storage compartment, the projection being suitable for snapping between two ridges of the outer wall of a sample tube that is positioned within the storage compartment. Berthold also

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fails to provide the complementary teaching or suggestion for storage compartments capable of receiving sample tubes from both the top and the bottom side of the frame with one and the same orientation of sample tube with respect to the frame to add to Leoncavallo. Therefore, a combination of Leoncavallo and Berthold would not come up with the claimed invention.

Accordingly, applicants request reconsideration and withdrawal of the claim rejection to claims 1 and 4 under 35 U.S.C. 103(a) as being unpatentable over Leoncavallo as applied to claim 1, and further in view of Berthold.

In view of the above, applicants request reconsideration of the claim rejections, withdrawal of the rejections, and the issuance of a Notice of Allowance.

If a telephone conference would be of assistance in furthering prosecution of the subject application, applicants request that the undersigned attorney be contacted at the number below.

No fee is required in connection with the filing of this Amendment. If any fees are deemed necessary, authorization is given to charge the amount of any such fee to Deposit Account 08-2525.

Respectfully submitted,



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